DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A51CE
Revision 1
AQUILA TECHNISCHE ENTWICKLUNGEN GMBH
AQUILA AT01
July 14, 2004

TYPE CERTIFICATION DATA SHEET NO. A51CE

This data sheet, which is part of Type Certificate No. A51CE prescribes conditions and limitations under which the product for which the type certification was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Aquila Technische Entwicklungen GmbH
Flugplatz
D-14959 Schoenhagen
Germany

I. Model AQUILA AT01, (JAR-VLA), approved November 4, 2003

Engine	One Rotax 912 S3, TCDS E00051EN
Fuel	100LL minimum grade aviation gasoline.
Oil	API System "SF" or "SG" multi grade (See Airplane Flight Manual recommendations) Do not use aviation grade lubricants.
Coolant	See Pilot's Operating Manual/Airplane Flight Manual
Engine Limits	All operations, 5500 rpm (2260 propeller rpm), (93 hp, 69 kW)
Propeller	Mt-propeller, MTV-21-A/175-05 constant speed. TCDS P16BO
Propeller Limits	Diameter: Maximum 69.1 inches (1755 mm) Minimum 68.7 inches (1745 mm)
Airspeed Limits	V_{NE} 165 KIAS 162 KCAS V_A 112 KIAS 109 KCAS V_{NO} 130 KIAS 128 KCAS $V_{FE\ (TAKEOFF\ FLAPS)}$ 90 KIAS 87 KCAS $V_{FE\ (MAXIMUM\ FLAPS)}$ 90 KIAS 87 KCAS
C.G. Range	16.8 inches (427 mm) to 20.6 in (523 mm) aft of datum line.
Reference Datum	Wing leading edge at wing root.
Leveling Means	Wedge on fuselage cone at 31.5 inches (800mm) in front of horizontal tail leading edge
Maximum Weight	Takeoff and Landing 1653 pounds (750 kg)
Minimum Crew	1
No. of Seats	2 adjustable seats at 17.9 inches (454 mm) to 23.3 inches (591 mm).
Maximum Baggage	Baggage compartment 88.2 lbs (40 kg) at 53.2 inches (1350 mm) aft of datum.
Fuel Capacity	31.7 gallons (120 liters) total fuel in wing tanks. 29.0 gallons (109.36 liters) usable.

Oil Capacity	3.2 quarts (3.0 liters) total in reservoir at 33,0 (838 mm) in front of datum 1.1 quarts (1.0 liters) usable
Coolant Capacity	2.5 quarts (2.4 liters) total minimum 2.6 quarts (2.5 liters) total maximum in engine housing and cooler at 46,0 (1170 mm) in front of datum
Maximum Operating Altitude	14500 feet

Control Surface Movements

Aileron	trailing edge up	16° ± 1.5°
	trailing edge down	11° ± 1.5°
Elevator	trailing edge up	23° ± 1.5°
	trailing edge down	24° ± 1.5°
Rudder	left/right	29° ± 1.5°
Wing flaps	up	0° at stop of slotted flap
	take off	17° ± 1.5°
	landing	35° ± 1.5°

Manufacturer's Serial Numbers

AT01-121 and on (only manufactured by Aquila Technische Entwicklungen GmbH in Germany.)

Import Requirements

a) A United States airworthiness certificate (JAR-VLA Special Class) may be issued on the basis of a German Certificate of Airworthiness for Export signed by a representative of the Luftfahrt-Bundesamt (LBA), containing the following statement (in the English language): 'The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. type certificate No. A51CE and to be in a condition for safe operation.'

b) The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Sections 21.183(c) or 21.185(c).

c) The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country of manufacture (e.g., third party country) is FAR Section 21.183(d) or 21.183(b).

d) See Note 5.

Certification Basis

Certificated under the Special Class provisions of 14 Code of Federal Regulations (CFR), Part 21.17(b) --

Certification basis:

JAR-VLA thru amendment VLA/92/1 effective January 1, 1992 and

Additional Requirements: Aquila GmbH Engine Mount Connection Design criteria and Winglets for the Aquila GmbH AT01 JAR-VLA Airplane,
(published in the Federal Register, September 2, 2003 (68 FR 56809).

14 CFR Part 36 effective November 18, 1969, including Amendments 36-1 through 36-24

Type Certificate No. A51CE was issued November 4, 2003.
Date of Application for Type Certificate was December 3, 2001.

Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification. In addition, the following items of equipment are required: Pilot's Operating Handbook and Airplane Flight Manual, document nu`mber AT01-1010-100-US, Rev. A.01 dated July 18, 2003 or later approved revision, must be carried. The list of basic required equipment for Day-VFR operation is contained in the Pilot's Operating Handbook and Airplane Flight Manual.
Limitations	Eligible airplanes must adhere to the provisions of Aquila service bulletin SB-AT01-002 (wing structural bonding inspection and repair.)

NOTE 1: Weight and Balance:
A current weight and balance report including list of equipment included in the certificated empty weight and loading instructions, when necessary, must be provided for each aircraft at the time of original certification.

The certificated empty weight and corresponding center of gravity location must include full oil and unusable fuel.

NOTE 2: The placards specified in the LBA approved Pilot's Operating Handbook must be displayed

NOTE 3: Instructions for Continued Airworthiness and Service Life Limited components is included in the Aquila AT01 Maintenance Manual Section 4, "Airworthiness Limitations.' Revisions to Airworthiness Limitations must be LBA approved for the FAA.

Airframe life limit is 6,000 flight hours.

NOTE 4: All external portions of the airplane structure exposed to sunlight must be painted white except for areas of markings and warning marks. Any deviation must be approved by the manufacturer.

NOTE 5: Approved for Day-VFR operations only. This airplane cannot be converted for night operations, IFR operations or to a 14 CFR Part 23 airplane.

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